ENDGAMES

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PICTURE QUIZ
A 34 year old man with bilateral anterior uveitis and a rash

Fig 1

Fig 2

A 34 year old railway engineer of south Indian descent was under the care of the ophthalmology team. He was being treated for bilateral anterior uveitis with topical steroids and mydriatics after a one month history of decreasing visual acuity, photophobia, and ocular pain. He also had a four month history of irritation over his tattoo sites that his general practitioner had suspected was dermatitis related to ultraviolet radiation. He was also having severe night sweats. In view of these symptoms, he was referred to the medical team.

His medical history included well controlled asthma and two hospital admissions for lower respiratory tract infections in the past five years. He had no known allergies and the only drug that he took regularly was budesonide/formoterol 200/6. He was an ex-smoker, having stopped two months previously.

On admission, his observations were normal. Abnormalities over his tattoo sites were noted (fig 1) and his visual acuity was reduced to 6/18 bilaterally. All other systems examinations were normal. Full blood count, electrolytes, liver function tests, and bone profile tests were within normal ranges. C reactive protein was 13 mg/L (reference range 0-5) and his erythrocyte sedimentation rate was 14 mm in the first hour (0-10). Autoimmune serologies, VDRL, and HLA B27 were negative. Serum angiotensin converting enzyme was 154 mg/L (20-90). A chest radiograph was performed (fig 2).

1 What abnormalities can be seen in the figures?
2 What is the likely diagnosis?
3 How else does this condition present?
4 How would you manage a patient with this condition?

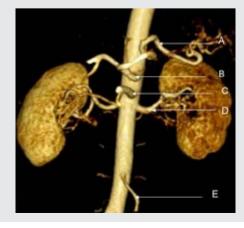Submitted by Anish N Bhuva and Harpreet K Lota
Cite this as: *BMJ* 2011;343:d6831

ANATOMY QUIZ
Branches of the abdominal aorta

Identify the structures labelled A to E in this abdominal magnetic resonance angiogram.

Submitted by Jayaraj Viswanathan, Amy Au-Yong, and Iain T H Au-Yong
Cite this as: *BMJ* 2012;344:e516

STATISTICAL QUESTION
Parametric *v* non-parametric statistical tests

Researchers investigated five year mortality in patients with chronic heart failure by comparing those with impaired left ventricular function (n=359) with those with preserved function (n=163). A prospective cohort study design was used, with patients enrolled if they had had stable symptomatic chronic heart failure for at least three months.

Characteristics of patients measured at recruitment included age and heart rate. Patients with preserved function were a similar age to those with impaired function (62.5 (standard deviation 10.7) *v* 62.3 (9.10) years; independent samples *t* test: P=0.80). Those with preserved function had a lower median heart rate (69 (interquartile range 63-82) *v* 76 (66-89) beats/min; Mann-Whitney U test P<0.001). Five year mortality was significantly greater in patients with impaired left ventricular systolic function (41.5% *v* 25.2%; P<0.001).

Which of the following statements, if any, are true?

a) The independent samples *t* test is a parametric test.

b) The use of the independent samples *t* test assumed that age was normally distributed for the patient groups in the population.

c) The Mann-Whitney test is a non-parametric test.

d) The use of the Mann-Whitney U test assumed the variance of heart rate was equal between patient groups in the population.

Submitted by Philip Sedgwick
Cite this as: *BMJ* 2012;344:e1753